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An analysis of differentiating personality factors between incarcerated heroin addicts and non-addicts

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AN ANALYSIS OF DIFFERENTIATING PERSONALITY FACTORS BETWEEN
INCARCERATED HEROIN ADDICTS AND NON-ADDICTS

BY

RICHARD WHITLEY DAVIS

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Arts in Psychology in the
Graduate School of the University of Richmond

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ACCEPTANCE

This thesis has been accepted in partial fulfillment of the requirements for the Degree of Master of Arts in Psychology in the Graduate School of the University of Richmond.

4/3/73
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ABSTRACT

The present study was designed to determine if long-term heroin addicts could be differentiated from short-term users and non-users of heroin on a personality inventory and by comparing their work histories and interpersonal relationships. Subjects were incarcerated felons at the Virginia State Penitentiary for men, and the data was collected while the men were still in the institution's Receiving Cell. First it was hypothesized that four factors (C, L, M, and O) from Cattell's 16 P. F. Questionnaire would be critical in discriminating addicts from non-addicts. When compared, the addict profiles and non-addict profiles did not differ significantly on any of the 16 factors. Secondly, it was hypothesized that addicts would have poorer work histories than non-addicts when length of time employed, length of time unemployed, number of times fired, and number of jobs at which eligibility for rehiring exists were measured. When compared on these indices, the addict group manifested significantly poorer work histories. Finally, it was hypothesized that addicts would perceive the interpersonal relationships they had with their parents, spouses, and friends as being more distant than the relationships non-addicts shared with those persons. This hypothesis was cautiously accepted with the firm recommendation that further research be done in the area. In conclusion, these findings have engendered serious doubts about the use of psychometric data to support the assumption that there is an "addiction prone" personality. Nevertheless, it was demonstrated that addicts can be differentiated from non-addicts by examination of their job histories and interpersonal relationships.

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INTRODUCTION

The use of unprescribed narcotic drugs is a phenomenon which is presently occurring at all socioeconomic levels of American society. Because of the phenomenon's recent and widespread pervasion, public concern has increased and researchers have reflected this new interest by publishing many reports germane to all aspects of the problem. Unfortunately, much of the literature has been general in nature and has devoted what the author considers an unnecessary amount of written space to describe the problem. On the other hand, there have been very few studies which have tested specific research proposals. Researchers in psychology, for example, have confined their efforts to administering personality inventories to drug-using populations. The obtained profiles were then interpreted in an ex post facto manner. Research of this nature, which is based on the "test and interpret" paradigm, is usually conducted without specific hypotheses in mind. The conclusions drawn from the research are formulated after the data have been collected. While such conclusions may advance the knowledge in an area, the lack of specific proposals at the outset of the research has contributed as much confusion to the literature as it has findings of significant value. Thus we have more printed matter to read, but we do not have a correspondingly more knowledgeable base on which to advance our studies.

In defense of the literature in this field, it must be acknowledged that the data which would support more specific proposals are difficult to obtain. The use of unprescribed drugs is illegal, and persons who use them cautiously avoid attracting attention to themselves. Obviously, knowledge of the narcotics-dependent person could be most rapidly assimilated if he could be observed

over the length of his addiction. Because this type of observation was not possible, the literature has been built, of necessity, on the reports and profiles of subjects who were imprisoned or who were receiving institutional therapy. In a definitive sense, these subjects cannot be considered active addicts for two reasons. If they are receiving institutional therapy, their addiction is either being controlled or treated for future termination. If they are incarcerated, their addiction should be terminated, and they are serving a prison sentence for crimes which, in most instances, were committed to support their habit. In either event, it should be clearly emphasized that recent research has not been based upon data obtained from persons who were actively and compulsively maintaining the behaviors involved in "on-the-street" addiction. The reader should be skeptical because it has not been determined if the time lag between the addict's removal from the street environment to the moment of experimental testing would produce significant differences in the obtained data.

Several studies involving the use of psychological test data have delineated personality disorders which, if considered in a group, form a theoretical basis for an "addiction-prone" personality. In other words, if one has a given psychological make-up and is in an appropriate environment, drug abuse is likely to occur. Research has described the "addiction-prone" personality as having the following traits: the personality is inadequate and passive (Eveson, 1963; Gilbert and Lombardi, 1967; Rosenberg, 1969; Wikler and Rasor, 1953); it is psychopathic (Gilbert and Lombardi, 1967; Hill, Haertzen, and Glaser, 1960; Sutker, 1971); it is sexually maladjusted (Rosenberg, 1969); and it handles anxiety and depression ineffectively (Eveson, 1963; Gilbert and Lombardi, 1967; Wikler and Rasor, 1953). Individuals having

similar personality profiles are unable to cope with their environment properly.

In the above studies, the conclusions were made on the basis of test profiles. Previous histories of the subjects were considered only for the convenience of differentiating between the addict population and the control population who did not use narcotic drugs abusively. No effort was made to correlate the profiles with background data, an omitted procedural step which might have been used to confirm or weaken the validity of the test findings. Instead the profiles were interpreted as a mirror of the test-taker's personality and the occurrence of unusually high or low scores on specific traits led to conclusions of maladjustment and disorder.

As the number of studies which used psychological tests increased, certain typical profiles emerged. Three studies (Hill et al., 1962; Gilbert and Lombardi, 1967; Sutker, 1971) using the MMPI have reported consistently elevated trait scores on the psychopathic deviancy (Pd) scale. To a lesser extent, the Ss in these studies exhibited deviancy by attaining critical trait scores on other MMPI subtest scales; however, deviancy on the other scales was not found as regularly nor to the extreme degree as the findings on the Pd scale.

In an attempt to classify the most frequently found personality deviations, Hill et al. (1962) were able to differentiate three distinct subgroup profiles with test data obtained from hospitalized former narcotic addicts. They knew that the MMPI could differentiate between normal Ss and Ss manifesting psychopathic deviate tendencies, but they also realized that further discrimination within this diagnostic category was inadequate. In their study, the authors were able to delineate successfully three psychopathic deviate subgroups according to a set of predefined standards. First, the psychopathic conduct

disorder subgroup contained those Ss whose profiles revealed critical trait scores on the Pd and Ma scales. Second, Ss in the neurotic conduct disorder subgroup demonstrated elevated scores on the neurotic triad scales of Hs, D, and Hy, as well as attaining a critical score on the Pd scale. Those Ss included in the schizoid conduct disorder group had attained critical scores on the Sc, Ma, and Pd trait scales. In this study, normal Ss were classified as those whose profiles lacked critical scores on all scales. The authors concluded that the personality characteristics of hospitalized former narcotic addicts are predominantly psychopathic in nature, although features from other types of disorders could be discriminated.

Similarly, Gilbert and Lombardi (1967), making outright comparisons between 45 addicted volunteers and 45 non-addicts, reported strong elevation of scores on the Pd scale. Considering a scale score of 70 as being critical for an indication of abnormality, the composite profiles also reflected abnormally high mean scores on the D, Pt, and Sc scales as well, although these means were not as elevated as that of the Pd scale. In the author's concluding remarks (p. 538), they state:

The most outstanding characteristics of the addict seem to be his psychopathic traits. He appears to be the kind of irresponsible, undependable, egocentric individual who has a disregard of social mores, acts on impulse, and demands immediate gratification. He is impatient and irritable, lacks the persistence to achieve a goal, and he will act out aggressively against authority or others who thwart his desires. . . . Thus, the use of drugs may seem to him to be the only realistic solution of his problems -- at least, it offers him a temporary relief from the pain of living.

In a recent article, Gendreau and Gendreau (1970) have criticized much of the literature in the area which has reported significant personality differences between addict populations and non-addict control groups. In their review which

cited a number of the studies mentioned (Eveson, Gilbert and Lombardi, and Hill et al.), they maintained that the occurrence of (p. 19):

an "addiction-prone" personality may have been in part due to an inadequate control group sample, at least in those cases where controls were used.

The standard criteria for control group Ss in addiction studies include:

1) minimizing socioeconomic differences; 2) minimizing intelligence and education differences; and 3) minimizing age and sex differences. To these general criteria, Gendreau and Gendreau required that their control group:

1) must not only have come from the same socioeconomic level, but also have had opportunities to obtain narcotic drugs and failed to become addicted; 2) and in the case of criminal Ss, suitable adjustment should be made for wide variations among previous conviction records. The purpose, then, of these additional criteria was to reduce even further the variation that had existed between the experimental and control groups in the previous studies.

Using these criteria to select appropriate populations, Gendreau and Gendreau compared the MMPI profiles of a criminal addict group with a non-addict criminal control group. Statistical analysis of the data revealed no significant differences on any of the nine scales. Nevertheless, their findings did support the previous MMPI studies (Hill; Olson; Gilbert and Lombardi) which reported elevated scale scores from addict Ss. Admittedly, their study deserves repetition before the doubts it casts upon previous literature can be accepted. The study, however, did raise two important questions. First, there are reasonable grounds for being suspicious of an "addiction-prone" personality concept. Psychological factors do have an important role in determining the cause of the addiction process, but the lack of significant trait differences in their study does not encourage attempts at outlining distinctively addictive personality profiles. Secondly, it is possible that the abnormal profiles, specifically the

elevated Pd and Ma scales, were caused largely by environmental and background factors. Such a conclusion is directly contrary to the earlier hypothesis that drug abuse engendered the abnormality.

There are at least three studies, not referenced in the MMPI literature, which used Cattell's 16 Personality Factor Questionnaire. Research by Pap Rocki (1960) and Phillips and Delhees (1968) has shown that heroin addicts tend to have extreme scores on four subscales. In their studies, addicts manifested extreme indications of emotional instability (C-), suspiciousness (L+), impracticality (M+), and guilt proneness (O+). These studies are indicative of the "test and interpret" paradigm which has been criticized previously. Neither researcher compared his data with data obtained from a control group composed of non-addicted Ss. Instead the sole purpose of these studies was to determine on what measured personality factors heroin addicts would deviate from the norm.

In a follow-up to his former study, Phillips¹ compared the profiles of 100 randomly selected high school students with the addict profiles on which he had previously reported. He found what appeared to be significant differences between the two groups on a number of subscales; however, statistical measurements were not applied and his design is fraught with so many procedural errors that to make conclusive statements would be scientific folly. His research is most vulnerable to criticism in the areas questioned by Gendreau and Gendreau (1970). First, the experimental population was much older (ages ranged from 18 to 40 years) than the control group population (ages ranged from 15 to 18 years). Second, the addicts were male residents of a rehabilitation center while the control Ss were high school students. Finally, he tested the control Ss three

years after he had tested the addicts. It seems likely that any or all of the preceding factors would confound any interpretation of the results.

In summary, the studies using the MMPI and the 16 P. F. Questionnaire have provided no conclusive evidence concerning the psychological influences of narcotics addiction. Through the use of tests, several general traits have been advanced as being typical of the addict personality; however, the assumption that these traits make one "addiction-prone" cannot be presently justified. Instead a safer but less specific alternative to the previous conclusions would examine the relationship between the abnormal personality traits and the environment in which they were found. It is quite possible that similar abnormal traits would be found among most persons living in a particular environment, and it is likewise conceivable that the environment in some way has a contributory influence upon the abnormalities. If this assumption is true, then the prior hypothesis that particular personality traits selectively determine who will and who will not become addicted is not acceptable. Rather the appropriate orientation for study is more global and views both the occurrence of abnormal personalities and narcotics addiction as elements in a particular environment. Under these circumstances the contingencies which lead to addiction can be generally acknowledged, but the formulation of a priori expectancies over who is most likely to become addicted will require much more research.

Social Factors Involved in Addiction: Regardless of the precipitating event that initiated drug abuse, the factors that maintain addiction have a more longstanding duration. Usually the maintaining factors were present in the individual's environment before he tried heroin initially, although their influence upon his behaviors at that time may have been negligible. Once the

person has become addicted, these factors acquire increasing importance in providing a continuing reason for the addict to seek narcotic induced withdrawal from the realities of his environment. The effects of narcotics when abused is a very amenable form of escape to persons who feel inadequate to cope with environmental stresses. Usually the drugs can be obtained with little effort if one has the money. Once the drug is obtained, the relief it provides is only moments away. Quite often the pushers themselves provide the paraphernalia necessary to "shoot-up" in order to avoid later prosecution for possession or distribution. If the drugs are not available, they cannot be used as evidence.

Of the several environmental factors which the literature emphasized most frequently, the influence of the family is, perhaps, most critical. In a lengthy description, Rosenberg (1969) illustrated the general inadequacy of the family backgrounds among the 50 addict Ss he used. The deficiencies he cited included references to: 1) the incidence of alcoholism and mental illness among parents; 2) the limited educational experiences of the parents; 3) criminal records among family members; 4) the incidence of parental separation (including divorce) and the age of the S when it occurred; 5) and economic status of the family. Further, in an effort to acquire some idea of subjective factors, the Ss discussed the relationship they had with their parents, including such topics as time spent at home, discipline, and parental interest in offspring. In general, his addict Ss had had poor family backgrounds which could be described by using a number of the essentially negative characteristics listed above. The Ss had experienced disturbances in childhood which, Rosenberg hypothesized, led to poorly integrated personalities as adults. Nevertheless, since Rosenberg did not use a control group of non-addict Ss, it is impossible

to discern whether his factors were specific to addict families or typical of all families from a given environment.

While describing similar family backgrounds, the research of Miller (1969) and Robbins, Robbins, and Stern (1970) revealed that many addicts expressed feelings of alienation. In discussing attitudes among abusers using all types of drugs, Miller stated that there is a "large group of young people who perceive themselves to be generally at odds with the system." (p. 580) They were disenchanted with the ethics and values of their parents and society, and many sought a new perspective through drug abuse. Users of non-addicting drugs often felt that the drug-induced experiences gave them greater insight into current political and social problems. The comparisons of solutions among peers made the treatment of societal ills a popular topic to be identified with and amplified the feeling of alienation from an unacceptable world. On the other hand, the users of addicting drugs were led into alienation because of the encompassing demands of the behaviors necessary to maintain addiction. Compulsive drug seeking activities, which were mandatory on at least a daily basis, required the enforcement of a lifestyle that markedly dissociated one from many interpersonal relationships and domestic responsibilities. In either instance, alienation connotes almost total separation from the standards which their parents, to varying degrees, represented.

Robbins, Robbins, and Stern (1970) stressed that the occurrence of drug usage is high among adolescents who feel inadequate or different. When these feelings occur because of parental opinions of him, the adolescent may attempt to hurt his parents by resorting to drug use, a practice he knows they will not like. Or if the background itself was deficient, the youth may allow narcotics

addiction and its associated behaviors to fill the void that family and work responsibilities fill for the non-drug user.

In an attempt to avoid more of the many psychological and psychiatric interpretations, Feldman (1970) traced the development of heroin usage in a formerly drug free subculture. He observed that the course of any subculture can be determined by a few persons of significant influence and following. In the black, ghetto environment, these persons are referred to as "stand-up cats", and they always represent the latest trend in the fulfillment of whatever is meaningful to the environment. New influences will develop and the old ones wither in light of the stand-up cats' interpretations and value judgements. With the trends determined by so few persons, it is easy to understand how heroin usage can spread quickly through a subculture and attain nearly epidemic proportions. A chain of events occurs which includes roughly the following sequential steps: 1) the effects of heroin must be defined initially as pleasurable; 2) the stand-up cats take the drug, usually sell it on the street, and are financially affluent because of their sales; 3) others in the subculture attempt to emulate the stand-up cats; 4) and no user really believes that he will become addicted or will be unable to stop his habit at a later time. The last event in the sequence is actually perceived as a challenge. The adolescent who is about to take his first narcotic injection believes that he is too tough and rugged to be controlled by a chemical agent. Although he has seen his friends become addicted, he believes that he can avoid addiction and thereby, become a stand-up cat himself. In essence, the stand-up cat concept is a very powerful factor in the ghetto subculture, but analyzed sociologically it is nothing more than a special type of peer group relationship.

It would be impractical to recount the number of studies reporting on the educational, employment, and criminal histories of narcotics addicts; however, the studies by James (1969) and Rosenberg (1969) are, perhaps, representative of the recent literature considering these areas. Although their designs lacked non-addict control groups and statistical analysis, both researchers found remarkably similar trends in their data. For instance, the educational level attained by most addicts was low. As measured by testing instruments, addicts usually terminated their formal education before they had reasonably approached their own potentials. Educational interests for many of the addicts could be defined as oriented toward the arts and literature, but none of the Ss had attained formal or public recognition for their efforts.

Employment histories can be characterized in two ways. First, the addicts in these studies were largely unable to obtain employment that required more than minimal skills because they lacked the formal education and training which was necessary to be employed. Secondly, the addicts were found to be generally sporadic and undependable workers. They changed jobs often, and when employed their absenteeism rates were quite high. In short, the addicts examined in this study were poor employment risks.

According to James' research, the crimes committed by addicts were usually of a non-aggressive nature. In a tabulation of the crimes committed by 48 persons since they became addicted, only 12 of 169 convictions were for acts of violence and included willful damage, assault, and actual bodily harm. Except for seven nebulously defined "other" crimes, the remaining 150 convictions did not involve direct personal contact with a victim. This majority included felony convictions for larceny, housebreaking, drug offenses, automobile theft, forgery, etc. Further examination of the Ss' backgrounds revealed many had

previous conviction records both as juveniles and as adults, and once the Ss had become addicted, the likelihood of their becoming recidivists was increased.

This brief survey of the sociological literature has described some of the dimensions of the environment in which narcotics addiction occurs. To set forth specific parameters, however, was not the intention of the discussion, and it is doubtful that any could be established because of the innumerable variables which interact in any drug using environment. Nevertheless, by elucidating upon some of the variables, we can conceive of an environmental framework for studying drug addiction. As presently discussed, this framework includes reference to the deficient family background of the addict; the influence and norms established by his peers; and to such personal data as educational, employment, and criminal histories. No relationships among these variables have been proposed by the present author beyond assuming that they interact in a manner which is conducive to the development and maintenance of narcotics addiction in a subculture. Having presented this general framework, a more specific question will now be considered.

PROPOSALS

The purpose of this study was to determine if incarcerated long term and heavy heroin users differ from their incarcerated non-narcotic using peers. First, the author proposed that heroin addicts exhibit a careless and negligent regard for their own well-being. This was hypothesized because some of the behaviors which are thought necessary for the maintenance of a healthy state of well-being do not occur regularly in the addict's behavioral routine. Secondly, it was proposed that the incarcerated addict's personality would manifest profiles of more extreme characteristics when examined by a personality inventory.

This was hypothesized because the addict has previously used a chemical agent to withdraw from daily frustrations. When the agent is not available, he is likely to experience some anxiety and lessened emotional stability, especially during the initial months of abstinence.

Disregard for Personal Well-Being: It should be reasonable to assume that all persons who are considered normal exhibit certain behaviors which determine their own well-being. When one acts in this regard, he is behaving in such a way that his physical and social health are maintained and, perhaps, enhanced. To maintain a healthy state of being, it is necessary for these behaviors to occur regularly and frequently. Moreover, these behaviors are usually incorporated into the lifestyle of a normal person to such an extent that their occurrence is considered natural and does not require serious forethought. On the other hand, if one or more of these behaviors is exhibited on an irregular basis, it can be assumed, disregarding extenuating circumstances, that the person is not behaving in a normal manner.

In the present study, two classes of behaviors which occur on a regular and frequent basis were examined. The classes of behaviors have been selected because of their recurring nature and because they are exhibited in some general form by all persons. Moreover, in a limited sense it is felt that the behavioral classes can be considered as a partial index of normality. No attempt is being made to define what a normal person is or does; however, the author is assuming that the behaviors selected for consideration occur naturally in the lifestyle of most individuals. Therefore, they can be examined and utilized as a means for determining normality, i. e., if the behavioral classes are representative of normal adult functioning, then either neglect of the behaviors or absence of them is an indication of a disregard for personal well-being.

One class of behaviors is concerned with the manner in which a person approaches his job. It is assumed that any adult having a reasonable regard for his own well-being will exhibit regular working habits. A person's job is his livelihood, his means of supporting himself, and his family. The research of James (1969) and Rosenberg (1969) revealed that the addict had difficulty in maintaining regular on-the-job working habits. The effects of heroin impaired his performance, and he usually lived with a continuing anxiety over when he would get his next fix. It was also typical of the addict to have a higher absenteeism rate than his non-addict peers. It is obvious that these characteristics do not define a specific behavior. Nevertheless, considered collectively, i. e., as job responsibilities, these characteristics may be used to examine a person's regard for his own well-being.

Another class of behaviors involves the interpersonal relationships that exist between friends, family, and spouses. Inherent in this relationship is a regard for its well-being and continuation. The normal person does not wish to alienate or to lose contact with these persons because he has found his association with them to be meaningful. In the author's experience with incarcerated addicts, the inmates almost always acknowledged that an addiction to heroin was detrimental to these relationships. The addicts explained that their associates generally exhibited displeasure upon learning of their habit. As their behaviors became more unidirectional toward obtaining the drug, the addicts usually found the maintenance of these relationships to be bothersome. The final result was an increasing disassociation from friends, family, and spouse.

The classes of behaviors which have been selected have several advantages for the present study. Most importantly, the behaviors exhibited by the

incarcerated non-addict should differ from those exhibited by the incarcerated addict. Since the incarcerated non-addicts are being studied as a control group, the behaviors they exhibit will be considered as normal. Deviations from these behaviors by incarcerated addicts are deviations from the norm, and if the variation is significant, then the addict's behaviors must be considered as abnormal. A second advantage of the selected behavioral classes is their accessibility. Incarcerated felons are usually suspicious of institutional staff; however, in spite of their suspicions, the author has found that inmates are generally truthful when answering questions about themselves. The personal histories they relate may be tinged with a moderate positive self-bias, but unless the questions asked of them are blatantly incriminating, the inmates attempt to be honest. For this reason, the classes of behaviors had to be as nearly neutral as possible in their ability to incriminate an inmate. The behavioral classes which have been selected for study are examined routinely by the author in the interview he conducts with each inmate. Although other questions of a more personal nature had to be asked, the questions pertaining to the present study were asked at the beginning of the interview. It was hoped this would prevent contamination of the answers because the inmate had become defensive.

Four Critical Factors from the Sixteen Personality Factor Test: It is possible to conclude from the MMPI and 16 P. F. literature previously cited that the heroin addict appears to be an unstable person who has difficulty coping with the routine stresses of his environment. He is impulsive by nature, demands immediate gratification for his actions, and often experiences feelings of anxiety and inadequacy. His behaviors reflect varying degrees of immaturity with a

corresponding fluctuation of emotional control, and his resultant approach to daily interactions is characterized by tenseness and an inability to relax.

In previous research with the 16 P. F. Questionnaire, addicts have manifested relatively extreme subscale scores on four factors, i. e., factor C (emotionally less stable (C-) vs. emotionally stable (C+)), L (trusting (L-) vs. suspicious (L+)), M (practical (M-) vs. imaginative (M+)), and O (self-assured (O-) vs. apprehensive (O+)) (see appendix C). There has been only one study (Phillips), however, which compared the mean 16 P. F. profile of heroin addicts with the mean profile from a control group of non-addicts. In that study, the mean scores of heroin addicts differed from the mean scores of non-addicts by more than one sten score on factors C-, M+, and O+. The addicts also differed in an extreme direction on factor L+ by just under one sten score. The deviation was less pronounced on the other subscales. On the 16 P. F. Test, factor scores which differ from the mean by 1.5 stens or more (the mean is 5.5 in stens) are usually considered manifestations of abnormal characteristics. All of the extreme subscale scores which Phillips reported exceed the mean by 1.5 stens. Moreover, they were the only subscale scores to exceed the mean by this margin.

It was proposed that heroin addicts would manifest similar 16 P. F. profiles to those reported by Pap Rocki (1960) and Phillips and Delhees (1968). Incarcerated addicts were expected to manifest extreme profile traits of emotionally less stable (C-), suspiciousness (L+), imaginativeness (M+), and apprehensiveness (O+). When compared with a control group of non-addicted Ss, the extreme nature of these scores should demonstrate adequately that measurable personality profile differences can be obtained between incarcerated addicts and incarcerated non-addicts. Further comparison of the addict's profiles with the

profiles of some other norming group was not undertaken because the information such a comparison would provide is superfluous to the goals of the present study. Moreover, it is doubted that Ss from some other norming group could meet the criteria for subject selection imposed upon the Ss used in this study. The following procedure was addressed to determine the validity of this hypothesis.

METHOD

Subject Selection: The Ss were obtained from the Virginia State Penitentiary for men. Each S was convicted of at least one felony and was interviewed at the Penitentiary's Receiving Cell where all incoming inmates are sent for classification. When sent to the Receiving Cell, the inmate has been incarcerated for a period of time ranging from several weeks to a year; however, most inmates had accumulated jail time ranging from 60 to 180 days. While assigned to the Receiving Cell, the inmates are given physical examinations, interviewed by a psychological assistant and social worker, given a battery of intelligence and proficiency tests, and undergo other routine procedures involved in classification.

Three groups of Ss were used. They were referred to respectively as the Long Term Users (LTU), the Short Term Users (STU), and the Non Users (NU). The LTU group was composed of persons who were addicted to the narcotic drug, heroin, before they were incarcerated. Criteria for selection into this group were the following: 1) the person must have been addicted to heroin for at least two years; 2) his habit at the time of his arrest must have averaged at least six capsules per day; 3) heroin must have been the drug of preference, i. e., except for intermittent use of cocaine ("speedballing") or marijuana, no other drugs such as barbiturates, hallucinogenics, amphetamines, or alcohol could be used on a regular basis.

The STU group was composed of those persons basically who did not meet the requirements for either of the other groups. Persons in this group have experimented with controlled drugs, but both the length and the degree of experience was limited. Other requirements for inclusion in the group included:

- 1) the S may have been addicted to heroin, but his habit could not have exceeded five capsules per day used in maintenance;
- 2) the S's drug of preference must have been heroin, although he may use marijuana and cocaine intermittently;
- 3) heavy users of hallucinogenics, barbiturates, and amphetamine type drugs could not be included in this group;
- 4) the S must not have experimented with heroin for more than one year.

The NU group included felons who lacked experience with all controlled narcotic drugs. Moderate use of alcohol and tobacco are acceptable, and limited experience with marijuana, i. e., having experimentally smoked 4 or 5 joints, were not grounds for exclusion from the group. Inmates who were alcoholics or used alcoholic beverages excessively could not be included.

Each group was to have 30 Ss, and the total experimental population would have had 90 Ss; however, it was necessary to delete the STU group from experimental consideration because an insufficient number of Ss were found who met the appropriate criteria. During the six weeks of data collection, approximately 350 inmates were processed at the Receiving Cell. Of these inmates only one met all of the criteria for inclusion into the STU group. The decision was made, therefore, to proceed with the analysis of the data using just two groups. The LTU and NU groups were experimentally compared and the total population included 60 Ss.

Because of the questions raised by the Gendreau and Gendreau study, the Ss in the present research were screened according to the same restrictions.

In that study, the Ss had to meet the following criteria: 1) the Ss must come not only from the same socioeconomic level, but also have had opportunities to obtain narcotic drugs and failed to become addicted; 2) the control group must have a criminal record; and 3) age and I. Q. differences were minimized between the two groups. With regard to the first criterion, the Ss in this study were convicted in the city and county courts of the State of Virginia, and it was usually true that the inmates were residents of the cities and counties which tried them. Not all Ss had had exposure to an urban environment as in the Gendreau and Gendreau population; nevertheless, the number of Ss from varying socioeconomic strata and rural, suburban, and urban backgrounds should be reasonably similar for both groups. Both groups in the present study are Virginia State Penitentiary inmates. Each inmate selected was convicted of at least one felony, but no inmate was selected who had served more than two terms in the Penitentiary. Thus, meeting the second criterion provided no difficulty in the experimental procedure. To meet the third criterion, all Ss had to be old enough to be assigned to the Penitentiary's Receiving Cell which is around the age of 21. Also each inmate must have an I. Q. of at least 70 which, according to the state's classification guidelines, represents a Borderline Intelligence capable of being schooled through the eighth grade.

Other reasons why an inmate could not be included for selection into the experimental population were generally defined and left entirely to the discretion of the interviewer. First, an inmate could be excluded if he refused to cooperate or gave obviously false information. Secondly, he was not included if he had an extensive mental or criminal history (for the latter history, this included, for example, persons who have ten or more convictions by the time they were age 21).

Testing Instruments: There were two testing instruments for the present study. First, Cattell's Sixteen Personality Factor Test was used to determine if addicts could be differentiated from non-addicts by the extreme scores they obtained on C, L, M, and O subscales. The test was scored in accordance with the instructions in the manual. Scales on the test are reported in "stens" or "standard ten" scores, having a range from 1 to 10 and a mean of 5.5. According to the manual, a score which is less than 4.0 or greater than 7.0 definitely exceeds the normal range, and should be considered an indication of abnormality. The distance between any two adjacent stens equals approximately 0.5 standard deviations. The entire scale spans a range of two and one-half standard deviations on either side of the mean.

Secondly, a two part questionnaire, which was administered orally to each S, had been constructed to measure the concept "disregard for personal well-being." The first section of the questionnaire (see appendix A for instructions, questionnaire, and scoring procedure) examined historical data concerning the S's job performance. It was specifically designed to answer these three questions:

1. How long were you employed at each job?
2. How many of your former employers would rehire you?
3. At how many jobs were you fired?

The second section (see appendix B for instructions, questionnaire, and scoring procedure) was an attitude survey focusing on the interpersonal relationships between the S and his parents, his spouse or girlfriend, and his friends. The answers to these questions required the S to make a value judgement about the relationship he shared with the particular person mentioned.

Questions about the S's father, mother, and spouse were alike except that a particular person was specified. For example:

1. How would you describe the relationship you had with your father one year before you were locked up?
2. How would you describe the relationship you have with your father now?

Of the next three questions, the S must answer the one that applies to him based on his previous answers. These questions attempt to evaluate the extent to which the S saw himself as responsible for the relationship he shared with the specified person.

3. If the relationship with your father has improved within the last year, please estimate how much you were responsible for the change?
4. If the relationship with your father has become worse within the last year, please estimate how much you were responsible for the change?
5. If there has been no change in the relationship between you and your father, how responsible are you for maintaining the relationship at its present level?

The third section of the Interpersonal Questionnaire examined the relationships the S had with his friends. The most important point in these questions is the legal character of the S's associates. Friendship relationships are subject to wider fluctuation than those that form between family members, and changes in the relationship can be confounded by a number of variables other than heroin addiction. For this reason, the following questions do not focus upon a change over some unit of time, but instead, they focus upon the legal character of the individual's associates. It is assumed that individuals who associate with drug users, i. e., persons who use illegal drugs in direct defiance of existing laws, are exhibiting a disregard for their own well-being.

By maintaining such associations, an individual has placed himself at least on the periphery of some of the less desirable influences of our society, and certainly has placed himself within the influence of persons who commit illegal acts regularly.

Interviewers: The interviewers, were full time employees of the Virginia State Penitentiary's Treatment Center. Their regular duties include the administration of initial psychological interviews to incoming felons and the interpretation of the test battery which each inmate must take. Their interviews focus upon the inmate's family, educational, employment, and marital histories, his crime and previous conviction record, and his present attitudes. At the time the research was conducted, each interviewer had attained approximately one year's experience on the job, and was nearing the completion of his master's degree in psychology at the University of Richmond.

Procedure: Data were collected during the psychologist's initial classification interview with each felon. Data collection included the interviewer orally administering both questionnaires to the inmate at the beginning of his interview. Because of intelligence, education, and other factors, the interviewer had to have reasonable freedom in explaining the questions to the S to avoid misunderstandings; therefore, rigid adherence to the administration of the questionnaire as written could not be expected. The collection of data further required that all Ss be given the 16 P. F. Test. The Ss were administered the 16 P. F. Test in random groups of 15 to 20 inmates at the same time that the test battery normally used for classification was administered.

Before an inmate was interviewed, the psychological assistant was given a standard interview form on which was included the inmate's name, Penitentiary number, age, I. Q., mechanical skills test score, clerical skills test score, crime, and prison term. Inmates were interviewed in order according to their

Penitentiary numbers. It was felt that further randomization would be an unnecessary encroachment upon the interviewer's already crowded schedule.

The reliability of the Job History Questionnaire may be challenged for accuracy as it is reported data and subject to distortion. The most probable sources of distortion for this study would be the failure of the inmate to remember the dates of his employment or termination, or a reticence to provide this information because he feels it may incriminate him. To a certain extent, the accuracy of the reported information can be determined by comparing it with the Pre-Sentence Investigation. The P. S. I. is a detailed social, legal, and medical history of the inmate prepared at the order of the court by the court's probation officer. To compile the report, the officer interviews the felon's family and relatives, previous employers and school officials; he contacts county, city, and F. B. I. records offices for conviction records; and in general, tries to exhaust all pertinent sources of information. Although every reasonable effort is made to insure accuracy, it is possible for some erroneous information to be included in the report. Nevertheless, the P. S. I. is regarded by Virginia Courts as the most comprehensive source of information about a felon awaiting sentencing.

The author realizes that reported and written data may not be accurate records of events which actually occurred; however, a comparison of reported data with the P. S. I. through correlational methods is a reasonable procedure for determining if the obtained information is reliable. Information gained from the P. S. I. was scored according to the procedure outlined in appendix A. The two sets of scores, i. e., the scores from the data obtained by the interviewer and scores from the data provided by the P. S. I., were then compared statistically to ascertain the degree of correlation between them.

Since two interviewers have been used, it is possible that they evoked different response patterns from the inmates. To determine if the data obtained by the different interviewers was reliable, a random sample of persons seen by one interviewer was reinterviewed by the other interviewer, and vice versa. To avoid causing suspicion among the inmates who were reinterviewed, each inmate was told that some questions had been raised about the data that had been collected, and it was necessary to question him again briefly. In all, eight inmates from each of the two groups were reinterviewed by the other interviewer, but neither interviewer had access to the original interview sheet during the second interview. These data were scored according to the procedures outlined in the appendix, and were then compared with the data obtained during the regular interview. The Spearman rho statistical test was used to assess the degree of correlation between the scores of the two sets of data.

RESULTS

The Mann-Whitney U test was used to determine if a significant difference existed between the means of the two groups on the Interpersonal Questionnaire. The obtained mean for the IIFU group was 94.60, and for the NU group, the mean was 105.43. Statistical comparison of ($z = 1.53$, $p < .0630$) these means with a one-tailed test approached but did not reach the level of confidence ($\alpha = .05$) established for this research. Nevertheless, because the obtained probability was so close to statistical significance, absolute rejection of the hypothesis is not considered to be a reasonable conclusion. Further discussion of this topic is included in the following section.

The Mann-Whitney U test was also employed to analyze the data from the Job Questionnaire. Statistical analysis with a one-tailed test revealed that

the LPU group was employed significantly less often during the last three years than the NU group, $z = 2.85$, $p < .0028$.

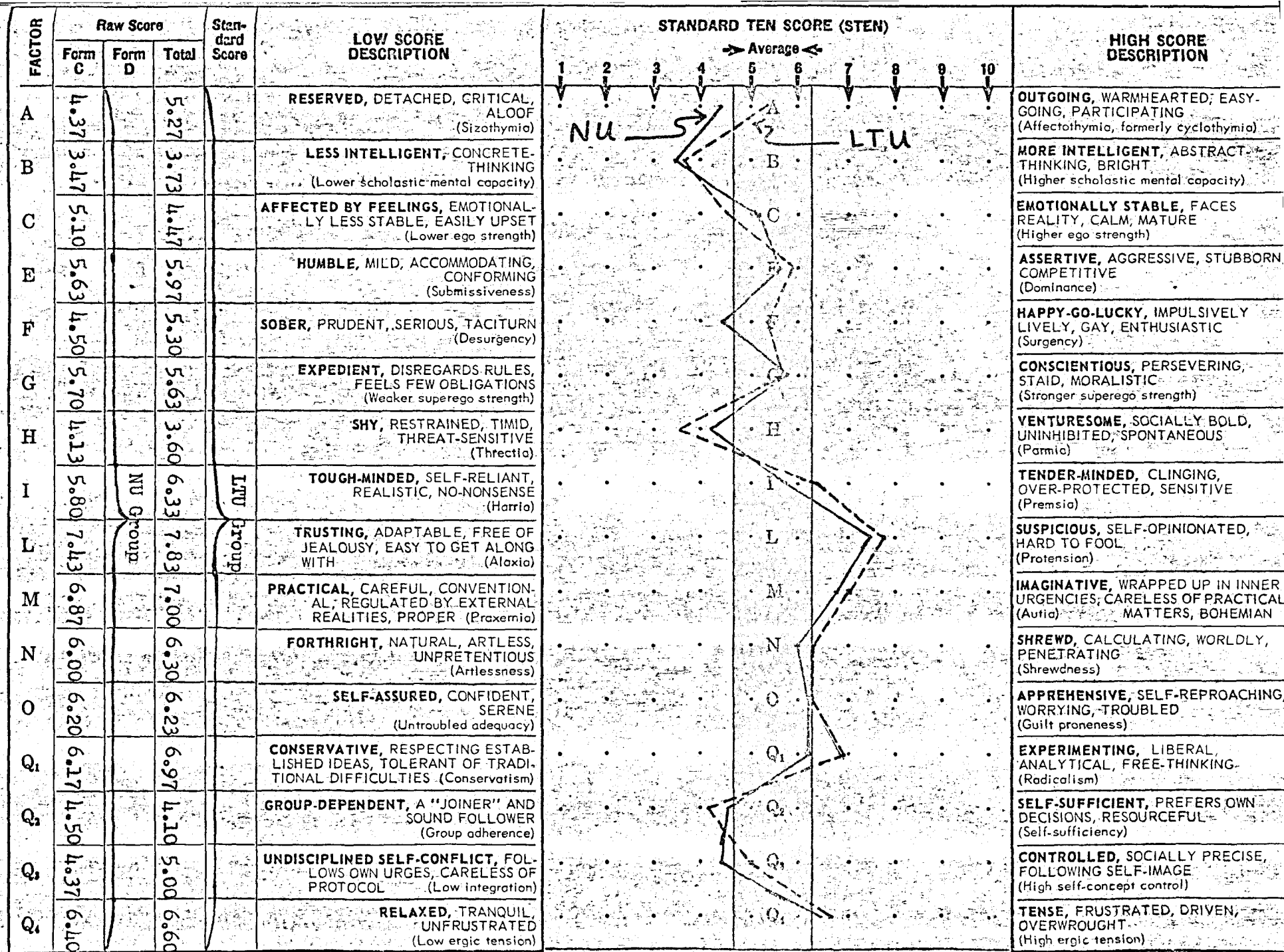
To determine the accuracy of the inmate's self-report, the obtained information was compared with the probation officer's research delineated in the Pre-Sentence Investigation. The courts did not order the P. S. I. to be prepared on all of the Ss in each of the groups. Among those on whom the information had been compiled, 15 inmates from each group were randomly selected for correlational evaluation. For the LPU group, the Spearman rho coefficient for the comparison between the data obtained by the interviewer and the data obtained from the P. S. I. was $r_s = .98$, $p < .01$. The coefficient for the same comparison from the NU group was $r_s = .92$, $p < .01$. The obtained correlation coefficients for the two groups are significant; therefore, it is reasonable to assume that the answers obtained from the two different sources are similar, at least for those Ss who had P. S. I.s on file.

Some of the inmates were reinterviewed to determine if the two interviewers evoked different patterns of responding from the inmates. From the reinterviews, four statistical comparisons were possible, and the Spearman rho correlation coefficient was used to determine the degree of correlation. When the first interviewer reinterviewed eight of the Ss from the NU group originally interviewed by the second interviewer, the obtained coefficient for the two sets of scores was $r_s = .96$, $p < .01$. The corresponding comparison for the LPU group was $r_s = 1.00$. When the second interviewer reinterviewed eight of the Ss from the NU group originally interviewed by the first interviewer, the obtained coefficient for the two sets of data was $r_s = 1.00$. Finally, the corresponding comparison for the LPU group was also $r_s = 1.00$. According to these coefficients, there is no reasonable justification for assuming that the two interviewers evoked different patterns of responding from the Ss.

Analysis of variance was the statistical instrument employed to assess the data obtained from the 16 P. F. test. A two factor repeated measures design afforded three comparisons with the data, i. e., the comparison between the means of the two groups, the comparisons among the 16 subscales on the test, and the possible interaction between the groups and subscales. The means of the NU group and LPU group did not differ significantly indicating that the addict Ss manifested personality profiles similar to the control group on non-addict Ss. Significant differences were found among the means of the 16 subscales on the test, $f = 21.27$, $p < .05$, which was expected because the factors on the test, by construction, approach mutual independence. For the purposes of this research, the most critical factor for analysis was the interaction between the groups and subscale traits. A significant interaction would have allowed precise determination of which of the 16 subscale traits the heroin addicts differed from non-addicts; however, this interaction was not found.

Three background factors were statistically examined by analysis of variance to determine the extent of homogeneity between the two groups. This procedure was undertaken to insure that the Ss for the study met the criteria for selection delineated in the Gendreau and Gendreau research. The mean age of the LPU group was 23.87 years and did not differ significantly from the mean age of the NU group which was 25.17 years. The two groups did not differ in intelligence, and the mean I. Q. for the LPU group and NU group was 96.43 and 99.40 respectively. Years of education was a critical factor. The LPU group completed a mean of 10.87 years of schooling, whereas the NU group completed a mean of 9.67 years of schooling. These means differed significantly, $f = 4.91$, $p < .05$.

Name: _____
 Comments: _____



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TABLE 1

Analysis of Variance for Groups X 16 P. F. Test

	<u>SS</u>	<u>df</u>	<u>F</u>
Between Subjects	271	59	
Groups	13	1	2.92
<u>Ss</u> W/in Groups	258	58	
Within Subjects	4486	900	
Subscales	1190	15	21.27*
Groups X Subscales	48	15	1.00
Subscales X <u>Ss</u> W/in Groups	3248	870	

*Significant at $\alpha = .05$ level of confidence

TABLE 2

Analysis of Variance for Education

	<u>SS</u>	<u>df</u>	<u>F</u>
Between Groups	22	1	4.91*
Within Groups	260	58	

*Significant at the $\alpha = .05$ level of confidence

DISCUSSION

In the present study, a rigorous effort was made to incorporate the selection criteria delineated by Gendreau and Gendreau into the experimental design. As a precaution to insure that extraneous factors did or did not influence the performance of the groups, three variables were analyzed statistically after the data had been collected. The results of the statistical evaluation indicated that the groups were essentially similar according to age and intelligence. Curiously, statistical analysis revealed that incarcerated heroin addicts had completed significantly more years of public schooling than the inmates who had no experience with narcotic drugs. The mean difference between the two groups in years of education completed was 1.20 years. While the obtained mean difference has statistical significance, it is questionable whether or not this difference is of critical importance. In more practical terms, the addict Ss terminated their formal education as high school juniors (10.87 years completed), and the non-addict Ss terminated as sophomores (9.67 years completed). The author believes that a difference of one year in high school education cannot practically alter the values, attitudes, and lifestyle of Ss who are otherwise alike.

It was proposed that incarcerated heroin addicts, because of the strenuous demands of narcotic addiction, would have experienced increasingly disintegrating relationships with those persons with whom they had regular contact. On the other hand, persons who did not use drugs should enjoy relatively good interpersonal relationships specifically because they were not subjected to the demands of addiction. The questionnaire designed to test this hypothesis did not yield significant results, but a nearly significant exact probability was obtained by

the Mann-Whitney U test ($z = 1.53$, $p < .0630$). Moreover the responses of the groups to the questionnaire yielded data which was in the expected direction, i. e., the mean score (94.60) of the ITU group was lower, indicating poorer relationships, than the mean score (105.43) of the NU group. It seems reasonable to conclude that there is a tendency for non-narcotic addicted inmates to perceive themselves as enjoying closer interpersonal relationships than heroin addicted inmates.

The data obtained from the job questionnaire strongly supported the hypothesis that addicts are unable to maintain regular work habits. The employment histories of incarcerated heroin addicts were significantly poorer ($p < .0028$) than the control group of non-narcotic using inmates. The raw data provided further evidence that this conclusion is reasonable. The employment records of the Ss were examined for a three year period from July, 1969 to July 1972. Time on the job was recorded in months, but the Ss received credit only for jobs at which they had been employed for three months or longer. Jobs at which the term of employment was less than three months duration were considered to be indications of sporadic and irresponsible working habits. The mean time employed in months for the ITU group was 10.33 months out of a possible 36 months of employment availability. Ten of the 30 Ss in the ITU group either did not work at all (engage in legal employment) during this time or they had no periods of employment reaching three months in duration. During the same three year period, the NU group was employed a mean of 16.97 months. Only one S of the 30 Ss in this group had no substantial employment during the three years. In this regard, the results are clear. Inmates who had been addicted to heroin demonstrated much poorer working habits than inmates who had not been involved with narcotic drugs. Overall, both groups of inmates were

employed less than half of the time period for which their records were checked. Even though they were not gainfully employed, these individuals were supported in some way. Although this assumption has not been tested, it is probably true for a majority of inmates that, as individuals, they were supporting themselves through crime or were being supported by criminal institutions.

The efforts to measure an individual's regard for his own well-being have revealed that incarcerated heroin addicts can be differentiated from incarcerated non-addicts with at least two types of behaviors. It could not be determined if the behaviors were characteristic of the addict Ss before they became heroin dependent. The original hypothesis simply stated that these behaviors would differentiate addicts from non-addicts; however, the motivating thought behind the hypothesis was that heroin addiction would interfere with the occurrence of these behaviors on a regular and frequent basis. To determine whether or not addiction to heroin actually caused a behavioral change in incarcerated addicts, a study of a longitudinal nature would be necessary. Such a study would evaluate the interpersonal relationships and on-the-job behaviors of Ss before they became fairly entrenched. The present findings suggest that a future study of this nature would produce pertinent information about the etiology of addiction, but many problems of a legal nature would have to be overcome.

The proposed differences between the two groups on the 16 P. F. Questionnaire were not found. This finding is important because it was proposed that the specific factors, C, L, M, and O would be critical in differentiating between the personality profiles of incarcerated heroin addicts and incarcerated non-addicts. By evaluating the profiles directly, the data, at least to the author, becomes more interesting. In the three studies which used the 16 P. F. Questionnaire,

heroin addicts exhibited extremely low trait scores (mean score below four stens) on factors L, M, and O. On the present profiles, the mean scores of both the NU group and ITU group on these factors were in the anticipated directions, but the mean score on only one factor, L, reached extreme dimensions. Trait manifestations on factors C, M, and O were within the limits defined by the manual as average for normal persons. Extreme trait manifestations were also obtained on factor B (B- or less intelligent) for both groups, and on factor H (H- or shy, threat-sensitive) for the addict group only.

By observing figure 1, it is apparent that the personality profiles of the ITU and NU groups are nearly identical. On no factor is the distance between the mean trait scores for each group as large as one sten which is the equivalent of one-half standard deviation. Even if that difference had had statistical significance, its importance would be negligible in determining personality characteristic differences. Perhaps the best evaluation of the obtained profiles is that they are representative of the personalities of many of the inmates incarcerated at the Virginia State Penitentiary during the summer of 1972. Prior addiction to heroin simply was not a critical factor in engendering personality profile differences. The lack of statistical significance and the observable similarities provide adequate testimony that the original hypothesis, i. e., heroin addiction will cause personality profile distinctions, is not tenable.

When interpreting the profiles, perhaps the most apparent consideration is the closeness of the factor scores to the overall mean. There were no marked patterns of deviation which indicated that, as a whole, neither group responded in a consistently extreme manner on any specific trait. The individual factor means fell within normal limits on 13 of the 16 factors. From a diagnostic

viewpoint, such a profile conveys that the personality characteristics are balanced, and manifest themselves in a reasonable manner without inclinations to the extreme. In reference to the extreme trait manifestations, the group profiles revealed tendencies toward lower intellectual ability (factor B-). Inherent in the interpretation of this trait is a disposition to lack perseverance, and maintain a boorish and quitting attitude when goal oriented behaviors are appropriate. A tendency toward a restrained and timid disposition (factor H-) seems to work in concert with the former manifestation. If the individual functions at a low intellectual level, he is likely to give up easily and evince shy and retiring characteristics in daily interactions.

The most extreme trait manifestations were found on factor L and indicate a propensity toward a suspicious and self-sufficient nature. It is reasonable that the mean profiles of a convict population should demonstrate well-developed tendencies on this trait. Because of the nature of a convict's "profession", he must not attract attention to himself. A suspicious attitude alerts him to events that could cause others to notice his activities, and therefore, he takes appropriate measures to avoid this. Collectively, the three traits imply that the convict is a socially restrained and suspicious individual whose functional intellectual capacity is somewhat lower than the norm. Such an individual avoids attention producing activities and exhibits a preference for short term, easily accomplished goals.

The mean profile obtained in the present study did not correspond with the profiles obtained in previous research. The present profile approximated more closely a normal personality and had fewer traits on which extreme scores were manifested. While the reasons for this difference is not known by the

author, several considerations of a speculative nature are offered. First, Ss for the present study were convicted felons while the previous research used high school students. Second, the experimental populations represented two distant geographic regions, i. e., California and Virginia. Finally, data for the former study were collected in 1963 and are now nine years old. The present data were collected during July and August, 1972. Under such circumstances, it is easy to understand how the two profiles would be dissimilar.

The author believes that the most important contribution of the present research has been its focus upon the overt background behaviors of the Ss. In the literature previously cited, background factors were excluded from experimental consideration while primary attention was devoted to the assessment of group personality profiles. It is evident, however, that the method used for evaluating the Ss' background was relatively primitive and it examined too few behaviors. The goal of future researchers should be directed toward discerning what specific behaviors deteriorate when a person becomes narcotics dependent. The most important reason for studying other background factors, the author believes, is that the researcher gets a clearer perspective of the addict's actual lifestyle and of the environmental factors which influence him. Although heroin is physiologically addicting, it can be safely assumed that environmental factors help to sustain the addiction process. By isolating the behaviors which significantly deteriorate during addiction, perhaps it may be possible eventually to treat the causes of the problem rather than the symptoms through, for example, methadone maintenance programs. Probably, heroin addiction is most properly viewed as one problem area present in a particular subculture that has a number of problem areas. Successful treatment of any one problem area cannot be expected until some efforts have been made to mitigate

all of them. In that subculture, many persons should have similar personality characteristics because environmental contingencies have molded a number of their attitudes. If this is feasible, then individual personality characteristics would have a lesser role than has been thought previously in determining whether or not a person will become an addict. Finally, the concept of an "addiction-prone personality" can be removed from further experimental evaluation because it is a myth.

FOOTNOTES

- ¹Phillips, J. D. A comparative analysis of personalities of continuation high school students and drug addicts. Unpublished manuscript furnished to the present author upon request, 1 - 9. California Rehabilitation Center, Corona, California.

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Appendix A

Instructions to the Interviewer for Using the Job Questionnaire

The purpose of the questionnaire is to provide basic historical information about the S's work record. The questionnaire is constructed so that the interviewer can acquire the four items of information necessary to answer the three job history questions. Because the questionnaire will be used with persons of low intelligence and little schooling, several procedural steps which are listed in the text must be followed to avoid confusing the S. For convenience the three questions which are to be answered by the questionnaire are:

1. How long were you employed at each job?
2. How many of your former employers would rehire you?
3. At how many jobs were you fired?

Four facts of information are required. Obtain all four facts about the S's most recent employment before asking him about his second most recent employment.

Only the month/year of employment and month/year of termination are necessary. Jobs at which the S was employed for less than three months cannot be counted.

	<u>Most Recent Co.</u>			<u>2nd Co.</u>			<u>3rd Co.</u>		
	<u>Job Title</u>								
1. Mo/Yr of Employment	_____			_____			_____		
2. Mo/Yr of Termination	_____			_____			_____		
3. Eligibility for Rehire	Yes	?	No	Yes	?	No	Yes	?	No
4. Fired	Yes	?	No	Yes	?	No	Yes	?	No

For question 2, simply ask the S if his employer would rehire him. If the S states he does not know, a few further questions might provide the answer, i. e., "were you asked to leave?" or "why did you leave?"

Procedure for Scoring the Job Questionnaire

It will be necessary to employ two different methods for scoring the questionnaire. Each question has been arbitrarily assigned a certain weight based on the author's estimate of the importance of each question in relation to the other two questions. Accordingly, the weight of the first question is 4, the second is 1, and the third question is 1. In other words, the author believes that the first question provides the most important information, and this information is four times as important as the information provided by the other two questions. After the answers have been interpolated into points, the maximum point value for question 1 will be 100 points, and question 2 and 3 25 points each.

To determine the point value for question 1, the following formula must be used;

$$Y = 100 \frac{(A + B + C \dots)}{X}$$

where Y = the total points obtained by S for his answer to question 1; A = the time in months the S was employed at his most recent job; B and C, etc. = the time in months the S was employed at his next most recent jobs respectively; and X = the number of months in which the S was available for work. In the event the S has worked for more than three years, only his last three years of employment will be considered in the equation. This restriction will eliminate investigating the person's entire employment history and should provide reasonable information concerning his working habits.

Questions 2 and 3 have a maximum value of 25 points each, i. e., full credit of 25 points will be awarded to those Ss who have worked full time from July, 1969 to July, 1972. Since the number of jobs each person has had will vary, the number of jobs at which he is eligible for rehire and the number at which he was fired will be different for each S. This condition makes the awarding of a specific number of points for a specific answer impossible, because the person who had had the most jobs, in all probability, would be awarded the most points. In order to award points fairly, the length of time the S was employed must be considered. A ready index of actual employment time over total time available for employment is provided by the scoring procedure for the first question. Basically, the first question expresses the actual amount of time employed in ratio form. To score questions 2 and 3, the maximum number of points, 25, will be multiplied by the obtained ratio provided that in question 2, the S is eligible for rehire, and in question 3 he was not fired. If the S is not eligible for rehire or if he was fired, then the ratio obtained from question 1 will be reduced according to the following proportion:

$$\frac{\# \text{ times eligible for rehire}}{\text{total jobs}} \quad \text{or} \quad \frac{\# \text{ jobs not fired at.}}{\text{total jobs}}$$

This procedure permits a fair and accurate scoring of questions 2 and 3 without biasing the data because one S had more jobs than another S.

Appendix B

Instructions to the Interviewer for Using the Interpersonal Questionnaire

1. The questions in this section are designed to assess the S's attitudes toward his interpersonal relationships. On all of the questions, the S is required to make a decision which best describes his feeling about what was asked of him.
2. Each question is followed by a scale which ranges from one to five. Each number in the scale designates a particular alternative, and from these alternatives, the S must select one alternative to answer the question.
3. The S is required to answer the following questions: 1 - A, B, F, and G; 2 - A and B; and 3 - A, B, C, and D. These will be preceded in the test by an asterisk to make identification of the mandatory questions easier.
4. Because of their nature, the S must answer only the appropriate question among questions: 1 - C or D or E, and H or I or J; and 2 - C or D or E.
5. To avoid confusion, the Ss are to be shown the alternative answers for each question from which he is to select his answer. The alternatives are provided on a separate sheet which are placed in front of the S before the questioning begins. He is allowed only one answer per question, and once he has made his decision, no further changes will be permitted.

INTERPERSONAL QUESTIONS

In the following sections, the S is to evaluate the relationship he has with each person mentioned. For the first section, if a parent is dead or unknown, the S will be given a score of 3 where applicable, i. e., for questions A, B, and C, or D, or E, the S would receive a total of 9 points.

If a real parent has been replaced by a stepparent, then these questions shall be asked about the stepparent in lieu of the real parent. Similarly, if the parental role has been assumed by an aunt and uncle, grandparents, etc., then these persons will be treated as parents on this questionnaire.

1. Parental Relationships.

- *A. How would you describe the relationship you had with your father one year before you were locked up? (In the scale, the number 1 means a very distant relationship, 2 means a distant relationship, 3 a tolerable relationship, 4 a close relationship, and 5 a very close relationship).
Very Distant 1 2 3 4 5 Very Close
- *B. How would you describe the relationship you have with your father now?
Very Distant 1 2 3 4 5 Very Close

Of the next three questions, answer the one that applies.

C. If the relationship with your father has improved within the last year, please estimate how much you were responsible for the change? (In the scale, the number 1 means not responsible, 2 a little responsible, 3 partly responsible, 4 mostly responsible, and 5 means totally responsible.

Not Responsible 1 2 3 4 5 Totally Responsible

D. If the relationship with your father has become worse within the last year, please estimate how much you were responsible for the change?

Not Responsible 5 4 3 2 1 Totally Responsible

E. If there has been no change in the relationship between you and your father, how responsible are you for maintaining the relationship at its present level?

Not Responsible 1 2 3 4 5 Totally Responsible

*F. How would you describe the relationship you had with your mother one year before you were locked up? (In the scale, the alternatives are the same as those found in question A).

Very Distant 1 2 3 4 5 Very Close

*G. How would you describe the relationship you have with your mother now?

Very Distant 1 2 3 4 5 Very Close

Of the next three questions, answer the one that applies.

H. If the relationship with your mother has improved within the last year, please estimate how much you were responsible for the change? (In the scale, the alternatives are the same as those found in question C).

Not Responsible 1 2 3 4 5 Totally Responsible

I. If the relationship with your mother has worsened within the last year, please estimate how much you were responsible for the change.

Not Responsible 5 4 3 2 1 Totally Responsible

J. If there has been no change in the relationship between you and your mother, how responsible are you for maintaining the relationship at its present level?

Not Responsible 1 2 3 4 5 Totally Responsible

Before the S can answer these questions, it must be determined if he is married or has a reasonably steady girlfriend. If the S has never been married and has never had a serious relationship with a girl as defined by the S, then he will receive the minimum score possible, 1, for each of the three questions he could have answered, i. e., questions A, B, and C or D or E.

If the S has been involved in a relationship that has recently terminated, only questions A and D can be asked. The answer to question B must be considered 1.

2. Girlfriend/Spouse relationships.

*A. Considering the relationship you have with your wife/girlfriend, how would you have described this relationship one year ago?

Very Distant 1 2 3 4 5 Very Close

*B. How would you describe the relationship you have with your wife/girlfriend now?

Very Distant 1 2 3 4 5 Very Close

Of the next three questions, answer the one that applies.

C. If the relationship has improved, cite the extent to which you were responsible?

Not Responsible 1 2 3 4 5 Totally Responsible

D. If the relationship has worsened, cite the extent to which you were responsible?

Not Responsible 5 4 3 2 1 Totally Responsible

E. If the relationship has remained the same, cite the extent to which you were responsible for keeping it at its present level?

Not Responsible 1 2 3 4 5 Totally Responsible

In this section, questions A and B are dummy questions and cannot be considered in the final scoring because they do not ask for information of an attitudinal nature. They are included, however, for two reasons. First, to initiate the S into thinking about more than one person because he has not done this thus far in the questionnaire. Secondly, the answers selected by the S will determine the weight for that particular section (further explanation for this last comment will be provided in the procedure for scoring).

3. Relationships with your friends.

*A. How many of your friends use drugs?

(1 - 15 or more) (2 - ten to 14) (3 - five to nine) (4 - one to four)
(5 - none)

*B. How many of your friends do not use drugs?

(1 - none) (2 - one to four) (3 - five to nine) (4 - ten to 14)
(5 - 15 or more)

*C. How friendly are you with drug users?

Not Friendly 5 4 3 2 1 Very Friendly

*D. How friendly are you with non-drug users?

Not Friendly 1 2 3 4 5 Very Friendly

Procedure for Scoring the Interpersonal Questionnaire

There are three distinct areas of interest in this section of the questionnaire. Each area yields a different total possible point value which is determined simply by adding the points obtained for each question. The total point value for parental relationships is 30 points, for girl-friend/spouse relationships is 15 points, and for friend relationships is 50 points. In the opinion of the author, these areas of questioning are considered to be of equal importance; therefore, the weight for each area must be a number which raises the total point value for one area to the total point value of the other areas when they are properly weighted. Specifically, the weight for the first area, parental relationships, is 1.67 since this weight times the total point value is 50, and 50 is the nearest multiple of the three total point values. The weight for the second area is 3.33 because this weight times 15 also equals 50. Similarly, the total point value for the third area is 50, but the weights are not so arbitrarily determined. First, the number of the alternative selected for question A will serve as the weight for question C. The total raw score value for question C, then, is the weight times the alternative selected in question C. Secondly, question B will be similarly used to determine the weight for question D. The total raw score value for question D is the weight times the alternative selected in question D. Finally, the total raw score value for the entire section is simply the sum of these two values, and the maximum possible score is 50. After all sections have been weighted and all the values summed, the maximum possible for the entire questionnaire is 150 points.

Questions 1 - E and J, and 2 - E present a problem because they can be interpreted as having either positive or negative characteristics, depending upon the nature of the relationship as determined by the preceding questions. To avoid difficulty, if the relationship has been described as distant, then the value of the alternatives must be reversed. In other words, if the S admits responsibility for maintaining a distant relationship, the degree of his responsibility will be scored as either 1 or 2 rather than 4 or 5. On the other hand, if the S admits responsibility for maintaining a tolerable, close, or very close relationship, then no change is necessary in the scoring procedure.

Appendix C

Subscales from the 16 P. F. Test on which Heroin Addicts Manifest Elevated Scale Scores

A trait on the 16 P. F. Questionnaire is determined by a person's score on a particular factor. Factors are defined in terms of polarities which are separated by a continuum of 10 equal units (stens). For example, factor C provides information concerning a person's emotional state, and the continuum ranges from "emotional instability" (C-) to "emotional stability" (C+). The notation + or - refers to direction on the continuum. It is not to be interpreted as an indication of quantity or quality.

Emotionally Less Stable (C-): This factor refers to the overall personality integration and level of maturity of the individual rather than his general emotionality. He is easily annoyed by things and people, dissatisfied with the world, and may exhibit general neurotic symptoms. Other typically ascribed characteristics of persons manifesting this trait on the questionnaire include a general lack of frustration tolerance, evasive behaviors when faced with making personal decisions, and proneness to worry over routine details excessively.

Suspicious (I+): This factor, generally thought to reflect paranoid tendencies, signifies the presence of inner tensions and the defense mechanism projection. Such individuals are distrustful of others, withdrawn, self-sufficient and usually are not influenced by the views of those around them.

Imaginative, Impractical (M+): Persons exhibiting this characteristic are intensely concerned with inner urgencies, usually to the extent that they are immature and neglectful in matters of practical judgement. Other characteristics include imaginativeness, unconventionality, and generally low fortitude morale.

Apprehensive, Guilt Proneness (O+): This factor refers to persons who worry a great deal, who feel inadequate to meet the daily demands of life, and who become downhearted easily. Clinically, individuals whose profiles include this trait experience varying degrees of anxiety and depression. It is of interest to note that non-addict criminal populations usually manifest low (O-) scores on this trait because they "act out" their frustrations rather than internalize them.